## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

## (19) World Intellectual Property Organization

International Bureau



## 

#### (43) International Publication Date 13 May 2004 (13.05.2004)

**PCT** 

# (10) International Publication Number WO 2004/039399 A1

(51) International Patent Classification<sup>7</sup>: A61P 31/12

A61K 39/13,

(21) International Application Number:

PCT/EP2003/012160

(22) International Filing Date: 30 October 2003 (30.10.2003)

(25) Filing Language:

English

(26) Publication Language:

English

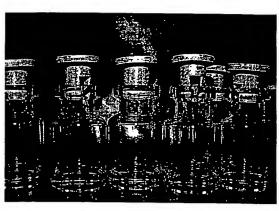
(30) Priority Data:

0225520.6 0225532.1	1 November 2002 (01.11.2002) 1 November 2002 (01.11.2002)	GB GB
0225543.8	1 November 2002 (01.11.2002)	GB
0317381.2	24 July 2003 (24.07.2003)	GB
0317380.4	24 July 2003 (24.07.2003)	GB
0317371.3	24 July 2003 (24.07.2003)	GB

- (71) Applicant (for all designated States except US): GLAXO-SMITHKLINE BIOLOGICALS S.A. [BE/BE]; Rue de l'Institut 89, B-1330 Rixensart Brussels (BE).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): MAYERESSE, Yves [BE/BE]; GlaxoSmithKline Biologicals S.A., Rue de l'Institut 89, B-1330 Rixensart Brussels (BE). STEPHENNE, Jean [BE/BE]; GlaxoSmithKline Biologicals S.A., Rue de l'Institut 89, B-1330 Rixensart Brussels (BE).
- (74) Agents: STEPHEN, Robert et al.; GlaxoSmithKline, CN925.1, 980 Great West Road, Brentford, Middlesex TW8 9GS (GB).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,

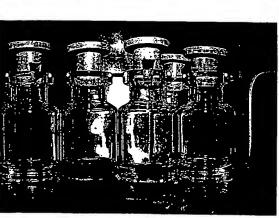
[Continued on next page]

(54) Title: IMMUNOGENIC COMPOSITION



(57) Abstract: The present invention relates to immunogenic compositions comprising a dried solid or highly viscous liquid formulation of inactivated polio virus (IPV) and a stabilising agent wherein the IPV retains its antigenicity and/or immunogenicity. Methods of producing a dried formulation of IPV which retains its antigenicity/immunogenicity are described.





### WO 2004/039399 A1

MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,

SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.